

decrease in cost is not real; it is the result of a fundamental deficiency in all current cost models. All of these models account for the change in the cost of providing capacity, but none accounts for the associated changes in the cost of reinforcement, or rearrangement or the effect on service quality. These costs are estimated through the expense factors which are based on adjusted historic costs associated with the optimal level of standby capacity. These factors do not change when input fill factors are adjusted.

To see this effect more clearly, consider the decision process used to purchase network service vehicles. The total cost of using the vehicle is the sum of all costs, the initial purchase price of the vehicle, and its operating costs. More expensive vehicles often have lower operating expenses due to lower fuel usage and increased reliability. Choice of vehicle is therefore based on the lowest total cost. Assume that the individual responsible for vehicle acquisition has followed this process faithfully whenever vehicles have been purchased. Each available vehicle was evaluated by properly weighing all of its costs. Further, assume that one particular vehicle type, (call it A), always had the lowest total cost and was always chosen. Now consider a proposal to mechanize the selection process using a cost model which properly estimated capital cost on the basis of the purchase price of each individual vehicle type, but modeled service and operating costs for all vehicles based solely on the historic operating costs, those associated with Vehicle A, the least total-cost vehicle. Since the model considered operating and service costs to be the same for all vehicles, such a model would estimate the total cost of any vehicle with a purchase price lower than A, no matter what its true operating costs, to have

a lower total cost than A because it imposed A's operating costs onto the other vehicle. No one would think of using the results of such a model as the basis for choosing a fleet of vehicles. Yet, each of the currently considered cost models makes exactly the same mistake with regard to fill factors. They allow the user to easily change the purchase price of the loop by adjusting the amount of standby capacity, but erroneously assume that the choice will have no effect on its operating cost. Due to the complexity of the relationship between standby capacity and operating costs of a network, it is unlikely that any model will be able to accurately reflect the true change in cost resulting from a change in fill factor. It is therefore imperative that the actual average fill factors achieved in a network be used as inputs to a cost model. No other fill factor is compatible with the operating cost estimation and therefore cannot result in an accurate estimate of total cost.

3. Loop Plant Structure Sharing

a. Scorched Node

The "scorched node" assumption is critical to the proper estimate of TELRIC costs because it establishes the conditions under which construction of the network is to take place. It is important to realize that under this assumption only the telecommunications facilities are affected. Electric power, gas, cable TV ("CATV"), sewer and water distribution facilities remain in place. It is the purpose of TELRIC to estimate the cost of building the capacity to provide the network elements under consideration. "Scorching" all utilities would remove the possibility of sharing existing power and CATV poles. It might also be construed to indicate simultaneous build-out of all utilities, resulting in an unrealistic level of structure

sharing. The “scorching” of the telecommunications system leads to the most realistic depiction of the conditions that would actually be faced by an entrant or incumbent assessing the economic feasibility of building the required facilities.

b. What Facilities Are In Place

As noted above, only the telecommunications facilities are assumed to be “scorched.” All other utilities, housing, roads, and businesses are assumed to be in place. These conditions should not be construed to mean that facilities such as underground conduits, owned by the telephone company, are available for the easy installation of telecommunications plant. The cost of providing and installing all facilities required by the network must be included in the estimate. A significant consequence of this assumption is that most installation activities will be conducted around and under existing buildings, roads, and landscaping. Relatively easy installation conditions will exist only in rural and undeveloped areas.

A very strict interpretation of the scorched node assumption would preclude the existence of any new development areas where streets were laid out and developers had opened trenches for the placement of distribution cable. U S WEST has modified that assumption somewhat to allow the inclusion of approximately five years of normal growth to be installed under “new development” conditions in its TELRIC models. This includes the availability of developer-provided trenches and easy placement conditions.

c. What Facilities Can Be Shared

Since all other utilities are assumed to be in place, it may be possible to share some of their existing structures. Utility poles owned by either the electric power or

cable television companies might, for example, be available. However, it is unreasonable to think that, given the assumption of "instantaneous" build-out of the network, any significant amount of sharing of directly buried facilities will take place. Sharing of buried facilities assumes that some other utility has a simultaneous need to bury a cable or pipe along the same route required by the telecommunications network. It also assumes that coordination of project schedules can be achieved and implemented. While it is not impossible that all of these things occur, it is highly improbable.

4. Switching Investments

The switching modules used in all the models are simplified in nature and reveal only general costs on a per-line basis. The switching cost is determined by several factors: the number of loops to be served, the CCS (hundred call seconds) needed to size the switch, the manufacturer and the pricing components used in the pricing of the switch, and the discounts that would vary by company.

The number of loops served in a wire center is one of the major predictors of the size of the switch. Use of number of loops as a predictor of cost through a cost curve will give varying degrees of cost variation due to size, keeping in mind that the switching modules are provisioned in lumps, not on a smooth curve. In addition, the cost per line is combined into one investment per loop rather than splitting out the non-traffic-sensitive portion of the switch versus the traffic-sensitive portion of the switch. In calculating TELRIC/TSLRIC, these costs require unbundled separate cost components to be identified.

The amount of CCS per switch is also a contributing factor to the switch size/cost. A primarily rural residence switch will have a much different switch capacity than a predominately business-oriented metropolitan switch. Generally, the rural switch will have a lower busy hour CCS which would require a smaller capacity. The lines served could be comparable, but the capacity would be dramatically different. A cost curve on a general loop basis may not recognize these differences.

Various switch vendors price their switches quite differently. Some vendors load costs on the switching components and CCS capacities, while others load costs on the line terminations. This can cause the cost to vary from non-traffic-sensitive classification to traffic-sensitive cost classifications which will have an impact on the termination cost of the unbundled loop. An additional component to the cost is the vendor discounts that vary among companies. Larger companies with large contracts can and do get favorable treatment in discounts, while small independent companies may not enjoy the same economies of scale.

If the cost models are used for the sizing and identification of high-cost funding, then the switching components need to be standardized so that a view across the nation will be consistent. If, on the other hand, the models are used for a whole host of purposes, including pricing, then the switching components need to be flexible and variable by jurisdiction, geography, and company in order to recognize the flexibility each company will face in the pricing of products and services.

BCPM does not separate switch functions between non-traffic-sensitive costs and traffic-sensitive costs. The cost of each switch was taken from the switch curve

developed by the BCPM team. This switch curve was based upon the industry data that was collected from various LECs. The driving factor of switch costs was statistically proven to be line size of the switch. Using a regression analysis, a switch cost was developed for the most significant driver lines.

C. Modeling Expenses

1. Capital Expenses

Consistent with financial theory and practice, a forward looking or weighted average cost of capital consists of the market costs for new debt and equity financing weighted by the market value capital structure of debt and equity. This forward-looking cost of capital is not included in the embedded base of the debt and equity for LECs, or in default values as proposed by the Hatfield or the proscribed cost of money set by the Commission. The Structure of the debt and equity and the calculation of the market-based cost of equity are the differences that need to be addressed.

Capital expenses need to reflect the market-based cost of money for new investment, which is separate and distinct from the cost of capital for embedded investment or the allowed rate of return determined by state and federal regulatory commissions. Embedded investment and Commission allowed returns use company embedded debt cost. The forward-looking cost of capital calls for the company's current or incremental cost of new debt financing. The Commission authorized return uses the company's regulated book value capital structure. The forward-looking cost of capital calls for the market values of debt and equity. The cost of equity capital is the expected rate of return on new equity financing which reflects

the risk of the investment, current capital market and economic conditions, and opportunity costs or the returns available to investors on alternative investments of comparable risk.

Extensive analysis of market data for U S WEST, other companies in the industry, and other firms of comparable risk divulge a higher cost of equity than is recommended by the Commission or the Hatfield.

2. Operating Expenses

Hatfield and BCPM take significantly different approaches to developing annual cost factors. Neither approach should be used as the basis for adopting or rejecting the base model. Either model can be revised to correct defects in this area, assuming the originators of Hatfield unlock the calculations to allow for such a revision. Both cost models should first be evaluated based on their network design characteristics. This is the portion of the model that requires the greatest technical expertise and is the most difficult to develop. Once the base is determined, a cost factor module can be inserted based on the desires of the Commission.

Both Hatfield and BCPM use historic actual costs as the basis for determining their operation expense factors. The primary differences in their approaches are:

- Hatfield bases its operating expenses on investment, while BCPM bases its operating expenses on the number of lines served;
- Hatfield makes arbitrary and unsupported adjustments to costs to reflect supposed forward-looking cost changes, while BCPM uses

various trend analysis and other established forecasting techniques to adjust its expense levels; and

- Hatfield ignores a significant portion of a company's current categories of operating expenses, whereas BCPM addresses all types of costs.

Forecasted annual expenses are always based on actual experience adjusted for projected changes for those expense levels. No company plans for the future by ignoring the past. Past experience trended for projected changes is the only means by which a company operates its business. It is the only reasonable basis for developing forward-looking costs.

Hatfield assumes that those expenses that are incorporated in their model vary in direct relationship to the investment the model produces. Under this approach, a forward-looking decrease in the cost of a switch would be accompanied by a concurrent decrease in the cost of maintaining the switch. Under this assumption, an increase in the discount on Lucent switches would be accompanied by a corresponding and similar decrease in the cost of maintaining these switches. Conversely, if the cost of placing loops increases, so would the cost of maintaining those loops.¹²

BCPM, on the other hand, assumes that operating expenses are independent of the cost of the equipment or plant. This is a far more logical assumption. The factors that influence the price a firm pays for its equipment or plant are seldom, if

¹² This approach is similar to the approach to costing service and maintenance of a car based on how cheap the purchase price was (see discussion supra).

ever, identical to the factors that determine the cost of maintaining these facilities. The cheapest car is not the least costly to maintain. During a real estate boom cycle, the cost of maintaining buildings does not necessarily increase at a rate comparable to the increase in property values. By basing these factors directly on the cost of the facilities produced by the model, Hatfield is able to maximize the benefit produced by underestimating plant cost. Decreases in estimating plant costs are accompanied by corresponding reductions in operating expenses. BCPM corrects this deficiency. By determining expenses based on the number of lines in service, changes in expense levels must be based on an independent analysis of the future factors that will impact a company's net productivity (i.e., productivity less inflation). Each change can be evaluated independently without an arbitrary tie to an independent variable, such as the cost of the plant.

In addition to adjusting operating expenses based on underestimated plant investment, Hatfield further adjusts expense levels based on an arbitrary factor. Network support expenses are reduced by 30%. The only evidence offered in support of this reduction is the superficial claim that LECs are inefficient. Any adjustment to expenses should require some form of empirical justification. The expenses in BCPM are adjusted based on each company's experience. For U S WEST the expenses were adjusted for both inflation and productivity. Both adjustments were based on established forecasting techniques and are designed to reflect future cost levels. Each adjustment can be scrutinized on its merits. The rationale for the adjustments is documented. The expenses included in the model require such an analysis. Only documented measurable changes can be reasonably

reviewed, evaluated and revised. Hypothetical adjustments such as those used in Hatfield serve only to contrive predetermined results.

Finally, Hatfield ignores many legitimate operating expenses. All business office and billing expenses are ignored in the development of expense factors. Legal, Regulatory, Accounting, Human Resource, Executive and a multitude of other expenses are assumed to be covered by an unsubstantiated 10% overhead factor. Hatfield assumption is that wholesale companies do not need to bill and that wholesale customers do not require customer service. The 10% overhead factor in the model is supposedly backed up by an analysis of other firms. However, when asked to provide all the documents supporting this assumption, AT&T only provided a two-page description of the study. Unfortunately, in U S WEST's dealing with AT&T and MCI, the sponsors of Hatfield, no evidence is ever provided to support their costing contentions. No documentation is provided for their assumptions other than a general discussion of the inefficiencies of monopolies or descriptions of studies that have supposedly been compiled but never presented.

BCPM, on the other hand, addresses each expense category individually. For U S WEST, each input can be evaluated independently on its merits and adjusted appropriately. No expenses are ignored or assumed to be incorporated in a never-provided study. The entire development of the factors can be traced to certain documented assumptions.

3. Treatment Of Joint And Common Costs

a. Indirect Expenses

BCPM and Hatfield use two different approaches to determine indirect expenses. Hatfield assumes a 10% common or indirect expense factor will cover all costs not otherwise calculated in the model. This 10% factor is applied against the direct costs developed by the model. As with other operating expense calculations, this method of applying the factor assumes indirect costs vary in direct proportion to the cost of the company's facilities. Increases or decreases in the estimated cost of loops or switching equipment are matched by proportionate changes in a company's Accounting, Human Resource, Legal, Regulatory and other indirect expenses. The 10% factor was supposedly developed based on a statistical analysis of the relationship of indirect to direct costs across several industries. To date, AT&T has never furnished U S WEST with this analysis, although it has been requested.

BCPM developed its indirect expense loadings based on actual forecasts of these costs supplied by the operating companies. The amounts are stated on a per-line-served basis and do not automatically fluctuate with changes in a company's direct costs. Each expense component category is based on actual historic cost adjusted for projected changes such as inflation and productivity. Each component can be evaluated independently and revised as the user deems appropriate.

The total lack of definition as to which costs are represented in the Hatfield common factor is complicated by the fact that the sponsors of the model, AT&T and

MCI, appear to have adopted this factor as a matter of expediency. The 10% factor is:

- Completely inconsistent with other evidence AT&T and MCI have presented on the relationship between direct and indirect costs;
- Completely inconsistent with the position they are taking with regard to indirect costs in their avoided cost studies; and
- Completely inconsistent with the Commission's rules.

The position these companies take on the amount of indirect costs which should be included in a study appears to depend solely on the results achieved. If the price they must pay for a service would be reduced by supporting a large indirect expense factor, AT&T and MCI strongly support a large allocation of indirect to direct costs (i.e., in avoided cost studies). Conversely, where a small allocation of indirect costs would reduce the price AT&T and MCI pay for wholesale services, they firmly support a minimal assignment of indirect to direct costs.

The Commission in its Interconnection Order stated that avoided cost calculations should include an assignment of indirect costs;

We agree with MCI, AT&T. . . that some indirect or shared costs are avoidable and likely to be avoided when a LEC provides retail services to a reseller instead of to the end user. This is because indirect or shared costs, such as general overheads, support all of the LEC's functions, including marketing, sales, billing and collection, and other avoided retail functions. Therefore, a portion of indirect costs must be considered 'attributable to costs that will be avoided' . . .¹³

The Interconnection Order goes on to state:

¹³ Interconnection Order ¶ 912 (emphasis added).

It is also true, however, that the overall level of indirect expenses can reasonably be expected to decrease as a result of a lower level of overall operations resulting from a reduction in retail activity.¹⁴

It is clear that the Commission adopted the position that many overhead or indirect costs will vary in direct proportion to a company's overall level of direct costs. In other words, many indirect costs are attributable or volume sensitive to a firm's underlying direct costs.

In Colorado, David B. Sult, testifying on behalf of AT&T, stated:

Based on the analysis set forth in Exhibit DBS-3, there is a direct relationship between the level of the ILEC's direct operating expenses in any given time period and the level of "indirect" or overhead/support functions such as finance and accounting, legal, external relations, human resources, or executive and planning activities.

In describing the analysis using data extracted from the 1995 ARMIS 43-02 Financial Reports for Eighteen Tier 1 Operating Companies, including U S WEST, was performed by AT&T to test that relevant indirect costs are, in fact, variable and statistically correlated to the overall size of the ILEC's operations. . . . The analysis indicates that 92% of the variation of the total indirect expenses can be explained by the level of total direct expenses, which represents a significant confidence level.

Mr. Sult goes on to recommend that the avoided cost discount should include a direct attribution of overhead or indirect costs to the directly avoided costs in calculating the whole discount. Mr. Sult concluded that since 25.6% of all the direct costs associated with local business service would be avoided on resale, a like percent of indirect expenses would be avoided.

¹⁴ Id.

It is important to note that Mr. Sult, in support of his position, presented statistical analysis identifying the relationship between a company's indirect and direct expenses. This study, sponsored by AT&T, showed that virtually all indirect expenses change in direct relationship to direct expenses. The slope-of-the-line in the study was 18.7%, indicating that each change in direct expenses would result in a 18.7% change in indirect expenses. This result is nearly double the 10% indirect expense loading AT&T and MCI are advocating be used in the development of TELRIC and that in the supposed study that supports that result.

With regard to avoided costs, MCI, AT&T and U S WEST have made the assumptions in their avoided costs studies that all indirect costs of the firm are directly attributed or variable with changes in direct costs; indirect costs will change in excess of 20%. In each instance, the level of change in indirect costs that is attributable to changes in direct costs is based on U S WEST's actual operating results, and in the instance of AT&T, supported by a statistical analysis of ten Tier 1 telephone companies. When it results in lower prices, such as in the avoided cost study, AT&T and MCI adopt U S WEST's position that there is a direct relationship between indirect costs and direct costs and that that relationship is based on actual results. It is only when these companies start calculating TELRIC that they support an indirect assignment that is less than 20%.

The Commission explains the importance of indirect costs for computing TELRIC as follows:

We conclude that, under a TELRIC methodology, incumbent LECs' prices for interconnection and unbundled network elements shall recover the forward-looking costs directly attributable to the specified

element, as well as a reasonable allocation of forward-looking common costs.¹⁵

The paragraph goes on to state:

More broadly, certain shared costs that have conventionally been treated as common costs (or overheads) shall be attributed directly to the individual elements to the greatest extent possible. The forward-looking costs directly attributable to local loops, for example, shall include not only the cost of the installed copper wire and telephone poles but also the cost of payroll and other back office operations relating to the line technicians, in addition to other attributable costs.¹⁶

In summary, the Commission's position is that:

Directly attributable costs shall include costs such as certain administrative expenses, which have traditionally been viewed as common costs, if these costs vary with the provision of network elements.¹⁷

If an indirect cost varies directly in relation to direct cost it should be attributed directly to a product and removed from the common factor. This is in concert with how U S WEST has attributed costs as part of its TELRIC.

With regard to the common costs, the Interconnection Order states that:

A properly conducted TELRIC methodology will attribute costs to specific elements to the greatest possible extent, which will reduce the common costs.¹⁸

Clearly, the Commission believes that most costs are directly attributable and they vary in proportion with direct costs. In addition, they indicate that a common allocator should be used to assign these few costs which are not

¹⁵ Id. ¶ 682.

¹⁶ Id.

¹⁷ Id. ¶ 691.

¹⁸ Id. ¶ 695.

attributable. As pointed out by AT&T witness Sult, virtually all indirect costs vary in direct proportion to direct costs and, therefore, should be included in the calculation of the avoided cost discount. As discussed previously, AT&T, MCI and U S WEST attributed all indirect costs to the directly avoided costs in the development of the wholesale discount. The only difference between the Commission's position and the assumptions all parties used in their avoided cost models is that the Commission says that some minimal costs are common and the studies assume all costs are attributable. BCPM adopts this approach in calculating indirect costs for TELRIC. AT&T and MCI in Hatfield use a common factor of 10% with no direct attribution of indirect costs.

b. Common Costs

With regard to common costs, the Interconnection Order states that: "A properly conducted TELRIC methodology will attribute costs to specific elements to the greatest possible extent, which will reduce the common costs."¹⁹ Clearly, the Commission believes that most costs are directly attributable. In addition, the Commission indicates that a common allocator should be used to assign those few costs which are not attributable. As pointed out by AT&T witness Sult, virtually all indirect costs vary in direct proportion to direct costs and, therefore, should be included in the calculation of the avoided cost discount. As discussed previously, AT&T, MCI and U S WEST attributed all indirect costs to the directly avoided costs in the development of the wholesale discount. The only difference between the

¹⁹ Id.

Commission position and the assumptions all parties used in their avoided cost models is that the Commission says that some minimal costs are common and the studies assume all costs are attributable.

The BCPM takes this approach in calculating indirect costs for TELRIC. AT&T and MCI in the Hatfield use a common factor of 10% with no direct attribution of indirect costs. AT&T and MCI in their avoided costs analysis have calculated a reduction in indirect expense in excess of \$.20 for every \$1 reduction in direct expense. However, in determining the cost of the network elements, both AT&T and MCI use a 10-cents-on-the-dollar relationship between direct and indirect expense. The retail discount is based on avoided costs. Increasing the attribution of indirect costs to direct cost increases the discount. In this study AT&T and MCI opt to use attribution factors that maximize the discount. In calculating TELRIC, reducing the indirect attribution ratio reduces the cost of the elements. AT&T and MCI now decide to use a minimal attribution of indirect costs. This inconsistency in their advocacy on indirect costs is extremely self-serving.

Following is a chart showing the relationship between indirect and direct costs in each company's TELRIC and avoided costs study.

	<u>Indirect as a Percent of Direct Costs</u>		
	AT&T	MCI	USWC
TELRIC	10%	10%	24%
Avoided Cost	47%	24%	24%

As illustrated, the attribution of indirect cost in Hatfield is only 10%. The attribution of indirect costs in AT&T's and MCI's avoided cost studies range from

24% to 47%. AT&T and MCI have sponsored studies that support both these positions. All studies are, as near as we can ascertain, based on the historical relation between indirect and direct costs. The study techniques were the same. The answers varied based on the objective. Assignment of indirect costs increases the avoided cost discount. In this instance, AT&T supports indirect cost assignment in the range of 24-47% and produces studies to support it. Decreases in the assignment or attribution of indirect costs to elements decreases the cost of unbundled elements. AT&T and MCI support a 10% attribution of cost in these studies. There is no justification for these contradictory positions except that all costing methodologies must minimize the amount MCI and AT&T pay for resale or unbundled services -- regardless of how irrational they are.

BCPM calculates indirect costs based on a company's actual results adjusted for projected changes in these expenses. This approach has the following advantages:

- It uses normal and excepted forecasting techniques;
- It is consistent with U S WEST's calculation of the attribution of indirect costs to direct costs in its avoided cost models; and
- It does not include arbitrary adjustments to indirect costs based on fluctuations in forecasted construction expenditures.

The Hatfield 10% factor has none of these advantages. Changes in plant investment have a direct impact on the indirect cost calculation. The level of indirect costs assigned to direct costs is less than half the indirect cost assignment AT&T and MCI support in their avoided cost calculations. Finally, neither AT&T

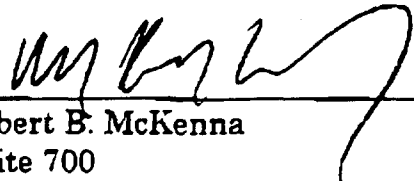
nor MCI has produced the studies that support the 10% calculation of common costs. The only study that has been submitted is an analysis sponsored by AT&T which indicates a more reasonable assignment of approximately 20%.

Development of reasonable costs is extremely important to the success of competition in the telecommunications industry. Costs which are understated will inhibit the RBOCs' ability to invest in the network and will limit competitors' incentive to invest in their own networks. Any assignment of indirect costs should be explicitly supported with facts and subject to regulators' scrutiny. AT&T's and MCI's self-serving approach of "it can be whatever produces the best results under the circumstances," should be rejected. They should be required to reconcile their conflicting positions regarding indirect expense assignment in their avoided cost studies and in Hatfield.

Respectfully submitted,

U S WEST, INC.

By:


Robert B. McKenna
Suite 700
1020 19th Street, N.W.
Washington, DC 20036
(303) 672-2861

Its Attorney

Of Counsel,
Dan L. Poole

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ATTACHMENT A

Cost Proxy Model Criteria

U S WEST Criteria	Staff Analysis Criteria	Joint Board Criteria	BCPM Meets Joint Board Criteria
The network designed by the proxy cost model should be capable of providing high quality telephone service.		Technology assumed in the model should be the least-cost, most efficient and reasonable technology for providing the supported services that is currently available for purchase, with the understanding that the models will use the incumbent LEC's wire centers as the center of the loop network for the reasonably foreseeable future.	<ul style="list-style-type: none"> ✓ The BCPM uses forward looking technology including fiber driven, integrated loop carrier systems, and digital switching at current switch nodes. ✓ The input data for BCPM reflects a broad sampling of the costs LECS are currently experiencing in the purchase and installation of state-of-the-art technology. ✓ All variables are easily modified by the user. ✓ BCPM uses incumbent LEC wire centers as the center of the loop network
See Criteria above.		Any network function or element, such as loop, switching, transport, or signaling, necessary to produce supported services must have an associated cost.	<ul style="list-style-type: none"> ✓ The BCPM provides and documents the cost of each network function. The algorithms which assure that sufficient plant and equipment are provided are clearly documented and verifiable. ✓ The BCPM, in addition to documenting the overall cost of providing basic universal service, will be capable of providing the unit costs of specific network elements. This capability, combined with an accurate and verifiable data base of material costs, installation costs, and network design assumptions, will allow for a more accurate view of the cost of these unit network elements.

Cost Proxy Model Criteria

U S WEST Criteria	Staff Analysis Criteria	Joint Board Criteria	BCPM Meets Joint Board Criteria
		Only forward-looking costs should be included. The costs should not be the embedded cost of the facilities, functions or elements.	✓ All costs used in BCPM are based on industry-wide surveys of forward looking costs of deploying and operating cost effective, state-of-the-art technology
		The model should measure the long-run costs of providing service by including a forward looking cost of capital and the recovery of capital through economic depreciation expenses. The long run period used should be a period long enough that all costs are treated as variable and avoidable.	<p>✓ In the BCPM model the development of both the return on and recovery of capital is based on the weighted average of LEC responses to an industry data request. This data request asked for each LECs forward looking return on debt and equity, debt ratio, cost of removal, salvage, and depreciation lives for each plant account plus the current taxes. These values are then used in the BCPM's capital Cost Module to determine the forward looking return and recovery of capital for each account.</p> <p>✓ The default values for cost of capital and economic depreciation expense in the BCPM are based on forward looking economic considerations.</p>

Cost Proxy Model Criteria

U S WEST Criteria	Staff Analysis Criteria	Joint Board Criteria	BCPM Meets Joint Board Criteria
		<p>The model should estimate the cost of providing service for all businesses and households within a geographic region. This includes the provision of multi-line business services. Such inclusion allows the models to reflect the economies of scale associated with the provision of these services.</p>	<ul style="list-style-type: none"> ✓ The BCPM includes residential and business access lines and makes adjustments for public and special access so that the network design incorporates the efficiencies that a provider of all basic access in a given geographic area enjoys. ✓ BCPM closes to actual business and residence line counts at the state level.
		<p>A reasonable allocation of joint and common costs should be assigned to the cost of supported services. This allocation will ensure that the forward looking costs of providing the supported services do not include and unreasonable share of the joint and common costs incurred in the provision of both supported and non-supported services, e.g., multi-line business and toll services.</p>	<ul style="list-style-type: none"> ✓ BCPM provides an industry-wide composite of forward looking operational and overhead expenses, by account, that are specifically associated with the provision of basic local exchange service. These are all easily adjusted by the user.

Cost Proxy Model Criteria

U S WEST Criteria	Staff Analysis Criteria	Joint Board Criteria	BCPM Meets Joint Board Criteria
The proxy model should be publicly available and easy to understand and operate.	Consistency with independent evidence.	The model and all underlying data, formulae, computations, and software associated with the model should be available to all interested parties for review and comment. All underlying data should be verifiable, engineering assumptions reasonable, and outputs plausible.	<ul style="list-style-type: none"> ✓ BCPM is completely documented, user friendly, and easily verifiable. All model equations and logic are clearly stated and described. Underlying data is specifically documented and validated by actual experience in installing state-of-the-art networks and technology.
See Criteria above.	<p>Potential for Independent evaluation.</p> <p>Flexibility</p>	The model should include the capability to examine and modify the critical assumptions and engineering principles. These assumptions and principles include, but are not limited to, the cost of capital, depreciation rates, fill factors, input costs, overhead adjustments, retail costs, structure sharing percentages, fiber-copper cross-over points, and terrain factors. The models should also allow for different costs	<ul style="list-style-type: none"> ✓ The BCPM allows the use to access and model all variables in the program either through easy to use drop down menus or through direct access to the EXCEL spreadsheets. ✓ The BCPM provides an integrated module to develop structure costs for aerial, buried and underground installations by density group and terrain difficulty. This allows the user to individually vary the cost of installation activities (E.G., plowing, trenching, conduit etc.) as well as the percentage of construction activity by density zone. Additionally the user can vary the percentage of an activity which can be shared among utilities, such as the placing of poles

Cost Proxy Model Criteria

U S WEST Criteria	Staff Analysis Criteria	Joint Board Criteria	BCPM Meets Joint Board Criteria
		of capital, depreciation , and expenses for different facilities, functions or elements.	<ul style="list-style-type: none"> ✓ BCPM provides methods to process multiple investment and expense views across multiple states. This provides the user with a great deal of flexibility in performing multiple scenario analysis. ✓ The BCPM uses a simple yet powerful module to help develop capital costs. The user is able to specify values for costs of debt and equity, debt/equity ratios, as well as depreciation and tax rates. The model uses the financial methodologies that an efficient new entrant would use as deferred taxes, mid-year, beginning year and end year placing conventions, Gompertz-Makeham survivor curves, future net salvage, and equal life group methods. ✓ BCPM develops separate depreciation rates and annual charge factors for each of the USOAR Main Accounts.